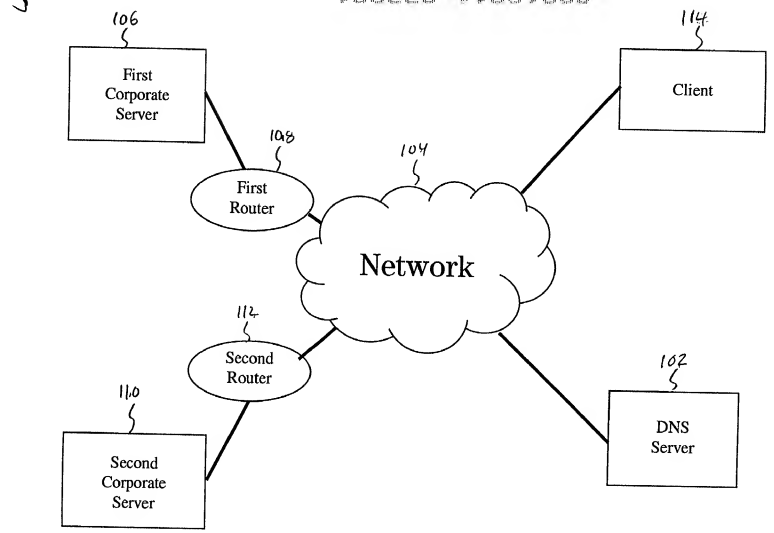
100
106
First Corporate Server
108
First Router
104
Network
114
Client
112
Second Router
110
Second Corporate Server
102
DNS Server

Fig. 1

Docket No. 1000

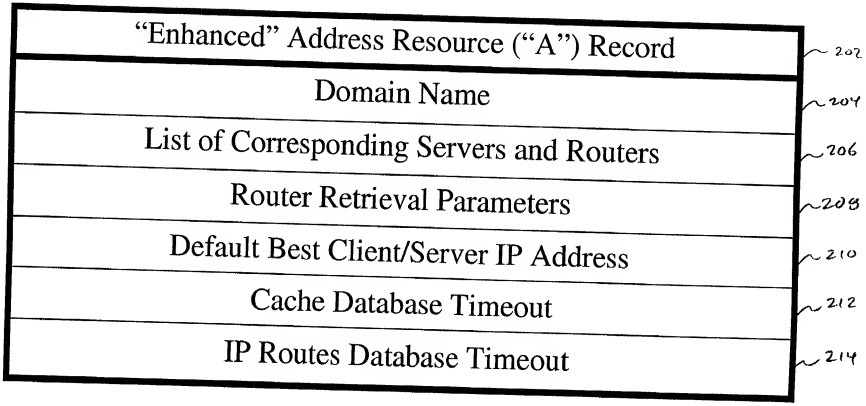

Fig. 2

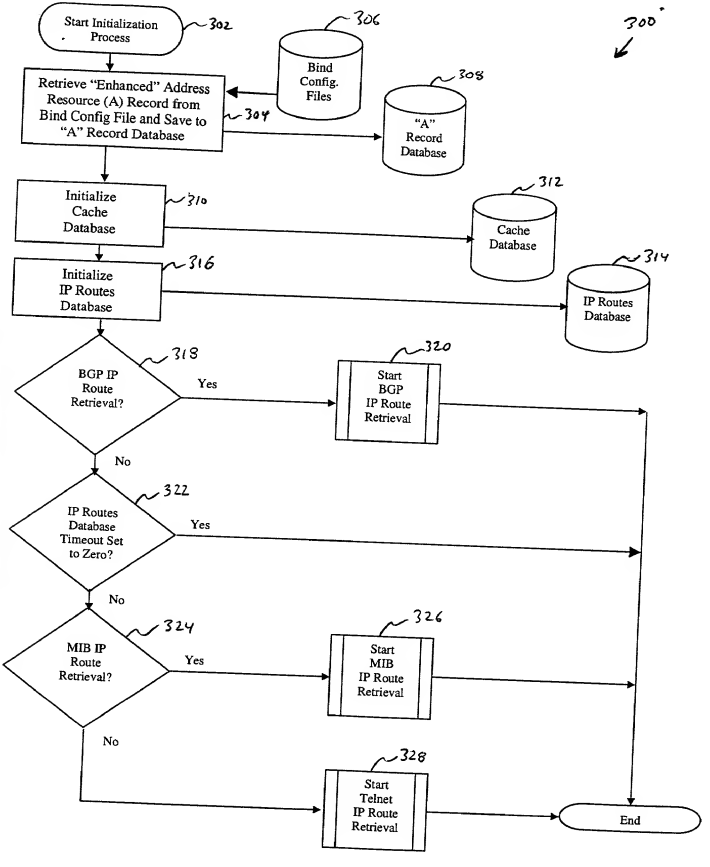
Start Initialization Process
302
Bind Config. Files
306
300
Retrieve "Enhanced" Address Resource (A) Record from Bind Config File and Save to "A" Record Database
304
"A" Record Database
308
Initialize Cache Database
310
Cache Database
312
Initialize IP Routes Database
316
IP Routes Database
314
BGP IP Route Retrieval?
318
Yes
Start BGP IP Route Retrieval
320
No
IP Routes Database Timeout Set to Zero?
322
Yes
No
MIB IP Route Retrieval?
324
Yes
Start MIB IP Route Retrieval
326
No
Start Telnet IP Route Retrieval
328
End

Fig. 3

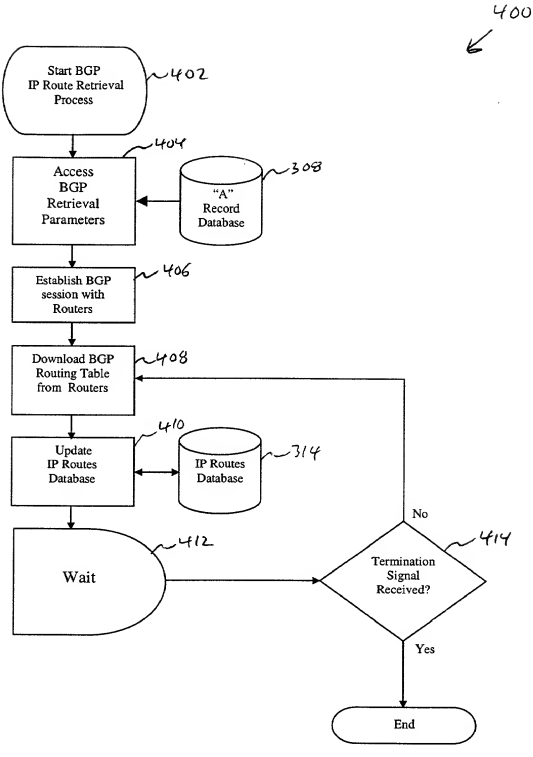
400
Start BGP IP Route Retrieval Process
402
Access BGP Retrieval Parameters
404
"A" Record Database
308
Establish BGP session with Routers
406
Download BGP Routing Table from Routers
408
Update IP Routes Database
410
IP Routes Database
314
Wait
412
Termination Signal Received?
414
No
Yes
End

Fig. 4

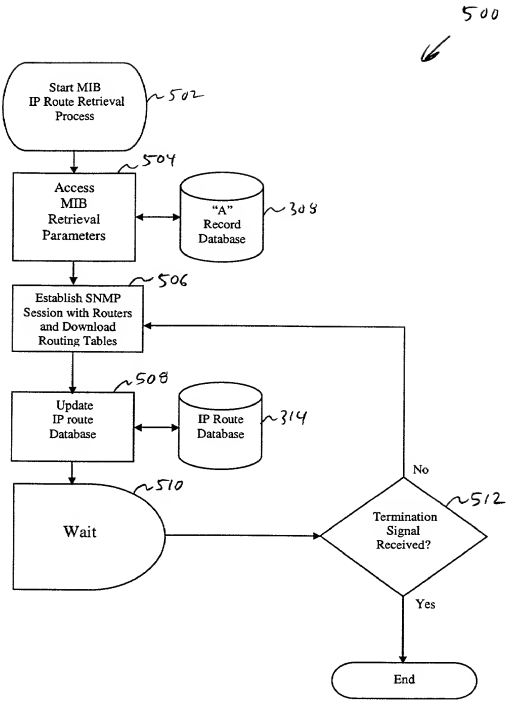
500
Start MIB IP Route Retrieval Process
502
Access MIB Retrieval Parameters
504
"A" Record Database
308
Establish SNMP Session with Routers and Download Routing Tables
506
Update IP route Database
508
IP Route Database
314
Wait
510
Termination Signal Received?
512
No
Yes
End

Fig. 5

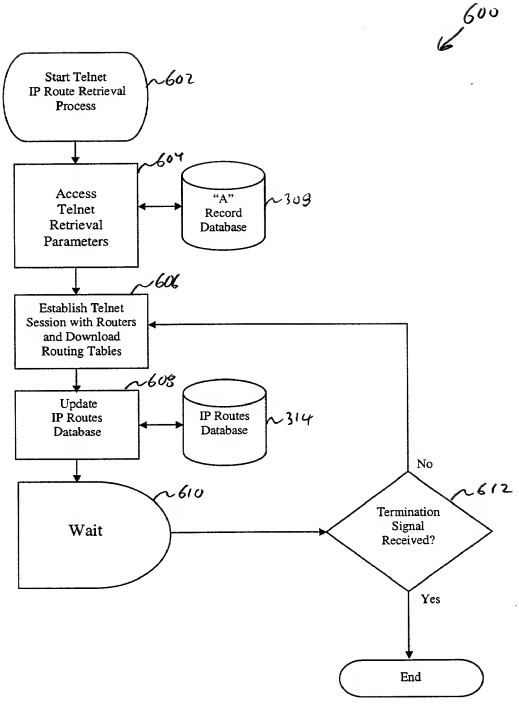
600
Start Telnet IP Route Retrieval Process
602
Access Telnet Retrieval Parameters
604
"A" Record Database
309
Establish Telnet Session with Routers and Download Routing Tables
606
Update IP Routes Database
608
IP Routes Database
314
Wait
610
Termination Signal Received?
612
No
Yes
End

Fig. 6

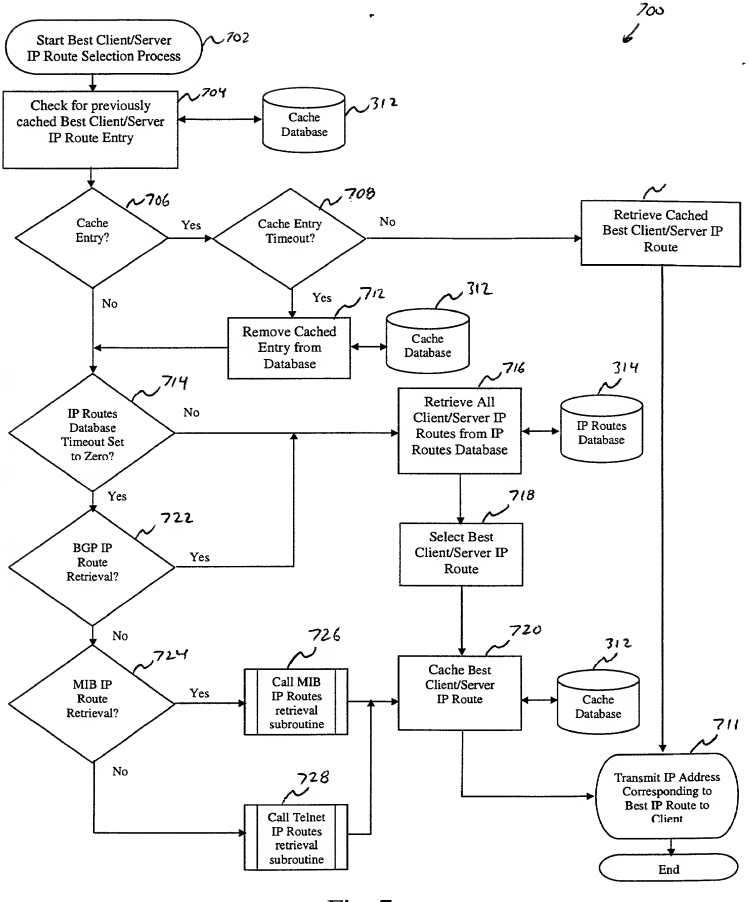
700
Start Best Client/Server IP Route Selection Process
702
Check for previously cached Best Client/Server IP Route Entry
704
Cache Database
312
Cache Entry?
706
Yes
Cache Entry Timeout?
708
No
Retrieve Cached Best Client/Server IP Route
No
Yes
Remove Cached Entry from Database
712
Cache Database
312
IP Routes Database Timeout Set to Zero?
714
No
Retrieve All Client/Server IP Routes from IP Routes Database
716
IP Routes Database
314
Yes
BGP IP Route Retrieval?
722
Yes
Select Best Client/Server IP Route
718
No
MIB IP Route Retrieval?
724
Yes
Call MIB IP Routes retrieval subroutine
726
Cache Best Client/Server IP Route
720
Cache Database
312
No
Call Telnet IP Routes retrieval subroutine
728
Transmit IP Address Corresponding to Best IP Route to Client
711
End

Fig. 7

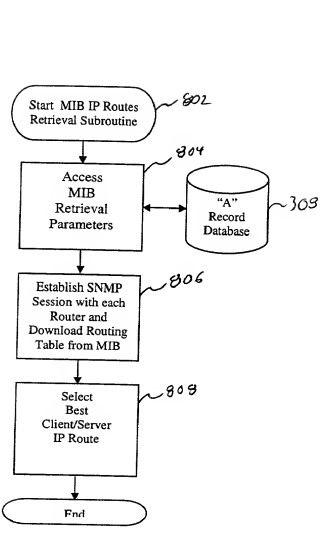
800
Start MIB IP Routes Retrieval Subroutine
802
804
Access MIB Retrieval Parameters
"A" Record Database
303
Establish SNMP Session with each Router and Download Routing Table from MIB
806
Select Best Client/Server IP Route
808
End

Fig. 8

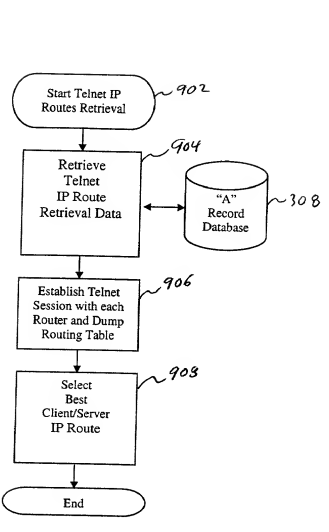
900
Start Telnet IP Routes Retrieval
902
Retrieve Telnet IP Route Retrieval Data
904
"A" Record Database
308
Establish Telnet Session with each Router and Dump Routing Table
906
Select Best Client/Server IP Route
903
End

Fig. 9